

FIG.1

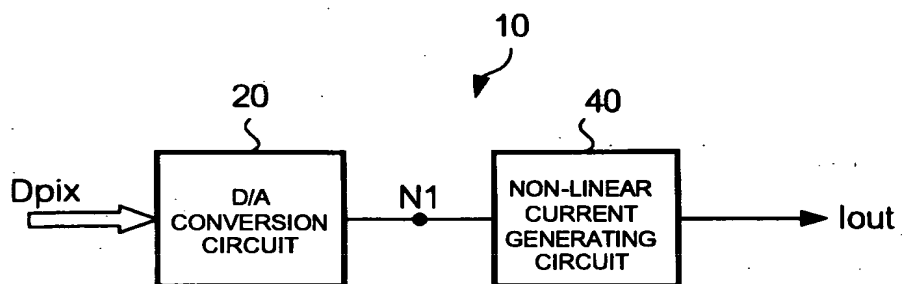


FIG.2

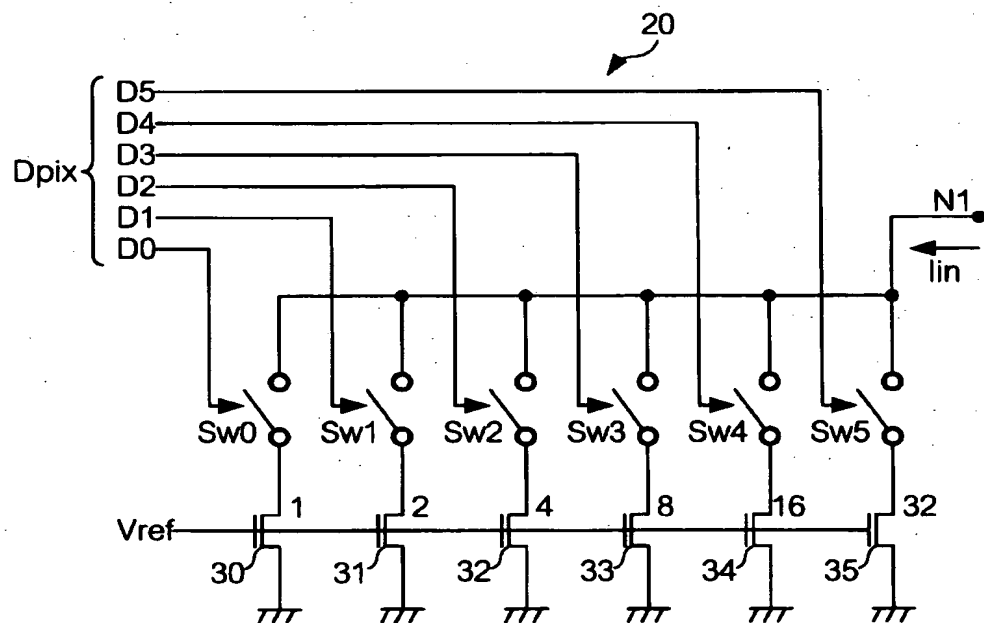


FIG.3

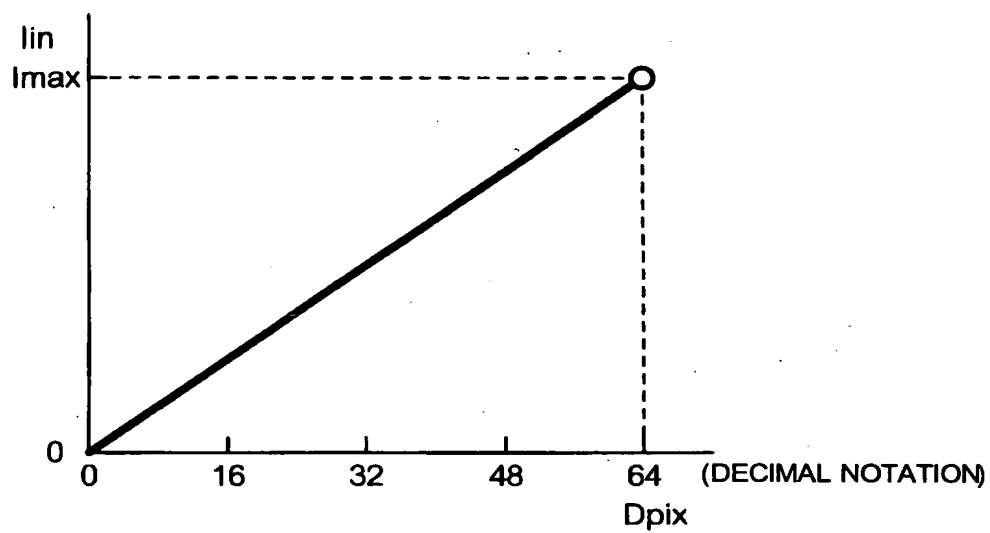


FIG.4

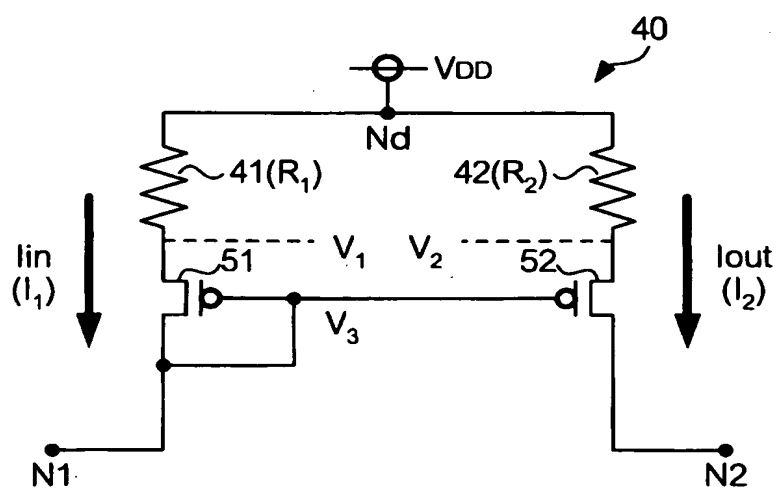


FIG.5

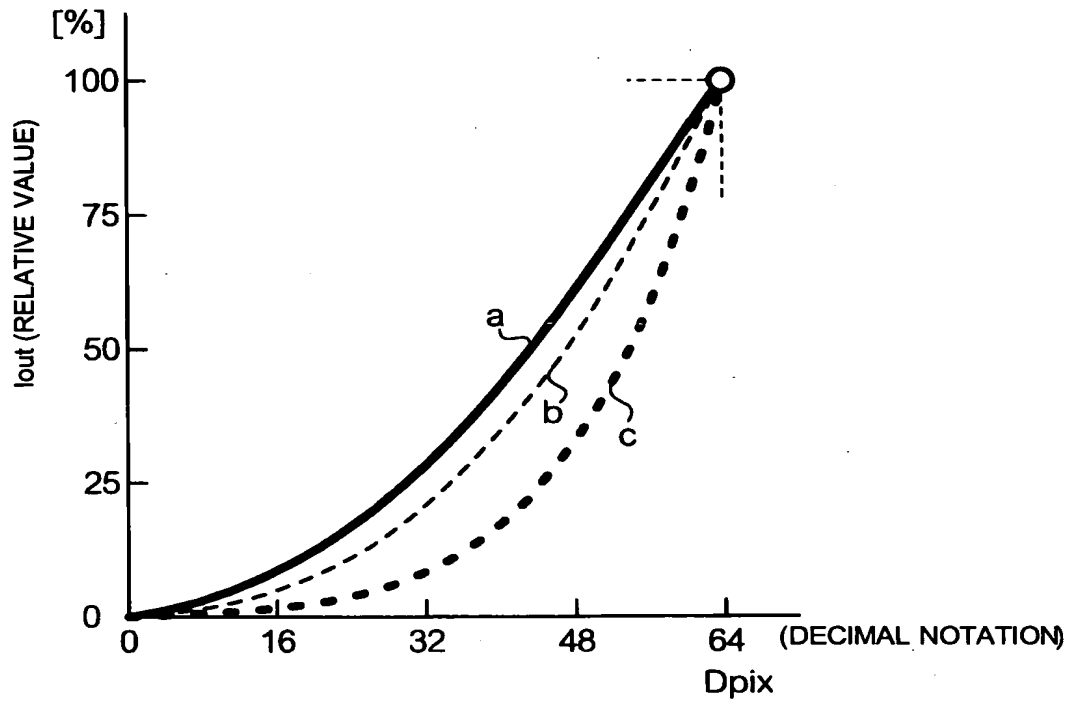


FIG.6

$$\sqrt{\frac{2I_1}{\beta_1}} = V_2 - I_1 \cdot R_1 + I_2 \cdot R_2 - V_3 - V_{th}$$

$$\therefore I_1 \cdot R_1 - I_2 \cdot R_2 + \sqrt{\frac{2I_1}{\beta_1}} = V_2 - V_3 - V_{th} \dots\dots (7)$$

FIG.7

$$\begin{aligned}
 I_2 &= \frac{1}{2} \beta_2 \left(I_1 \bullet R_1 - I_2 \bullet R_2 + \sqrt{\frac{2I_1}{\beta_1}} \right)^2 \\
 \therefore \frac{2I_2}{\beta_2} &= (I_1 \bullet R_1 - I_2 \bullet R_2)^2 + 2(I_1 \bullet R_1 - I_2 \bullet R_2) \sqrt{\frac{2I_1}{\beta_1}} + \frac{2I_1}{\beta_1} \\
 &= I_1^2 \bullet R_1^2 - 2I_1 \bullet R_1 \bullet I_2 \bullet R_2 + I_2^2 \bullet R_2^2 + 2I_1 \bullet R_1 \sqrt{\frac{2I_1}{\beta_1}} - 2I_2 \bullet R_2 \sqrt{\frac{2I_1}{\beta_1}} + \frac{2I_1}{\beta_1} \\
 \therefore R_2^2 \bullet I_2^2 - 2 \left(\frac{1}{\beta_2} + I_1 \bullet R_1 \bullet R_2 + R_2 \sqrt{\frac{2I_1}{\beta_1}} \right) I_2 + \left(\sqrt{\frac{2I_1}{\beta_1}} + I_1 \bullet R_1 \right)^2 &= 0 \dots \dots (8)
 \end{aligned}$$

FIG.8

$$I_2 = \frac{\frac{1}{\beta_2} + I_1 \bullet R_1 \bullet R_2 + R_2 \sqrt{\frac{2I_1}{\beta_1}} + \sqrt{\left(\frac{1}{\beta_2} + I_1 \bullet R_1 \bullet R_2 + R_2 \sqrt{\frac{2I_1}{\beta_1}}\right)^2 - R_2^2 \left(\sqrt{\frac{2I_1}{\beta_1}} + I_1 \bullet R_1\right)^2}}{R_2^2} \dots (9)$$

FIG.9

$$I_2 = \frac{I}{2} \beta_2 \left(\sqrt{\frac{2I_1}{\beta_1}} + I_1 \bullet R_1 \right)^2 \dots\dots (10)$$

FIG.10

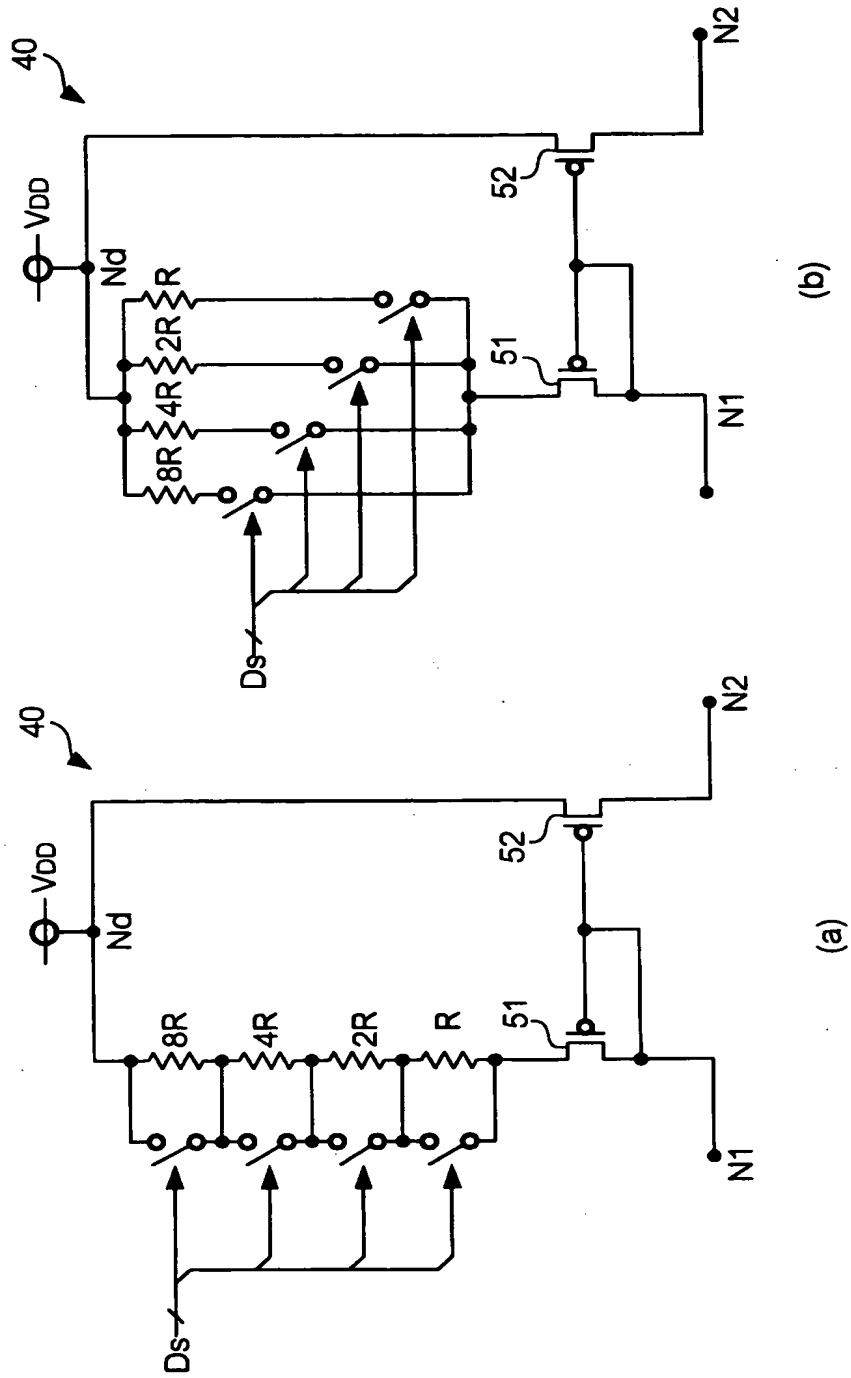


FIG.11

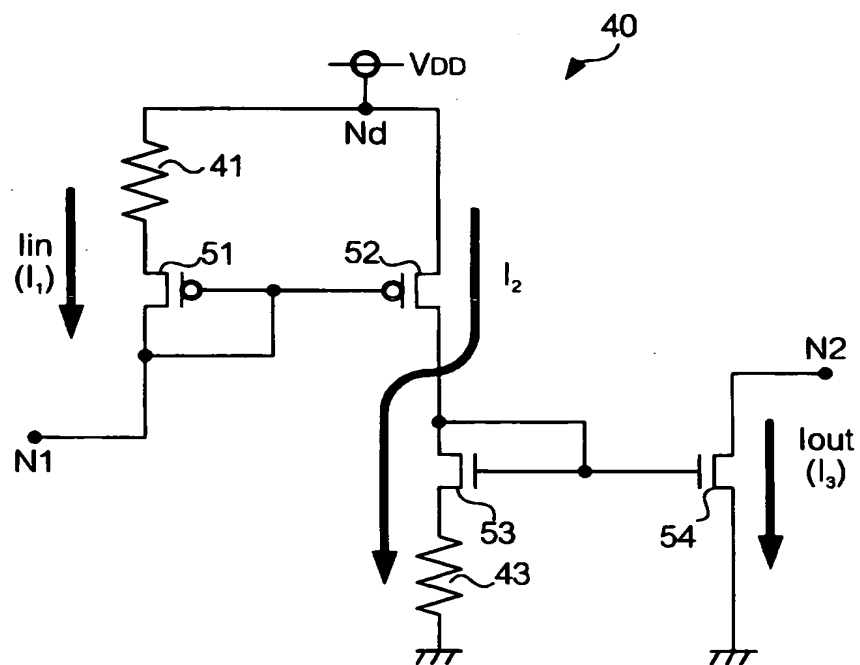


FIG. 12

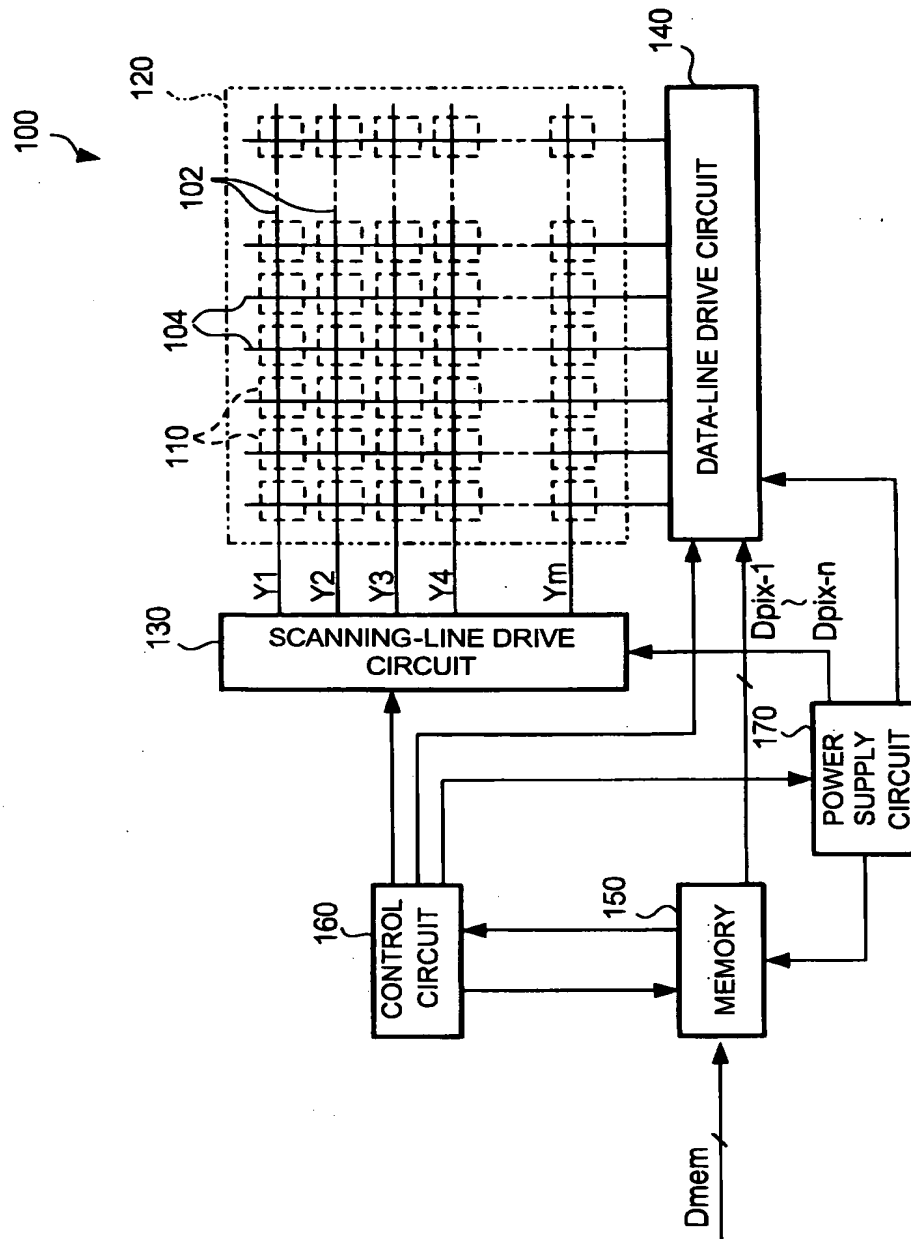


FIG.13

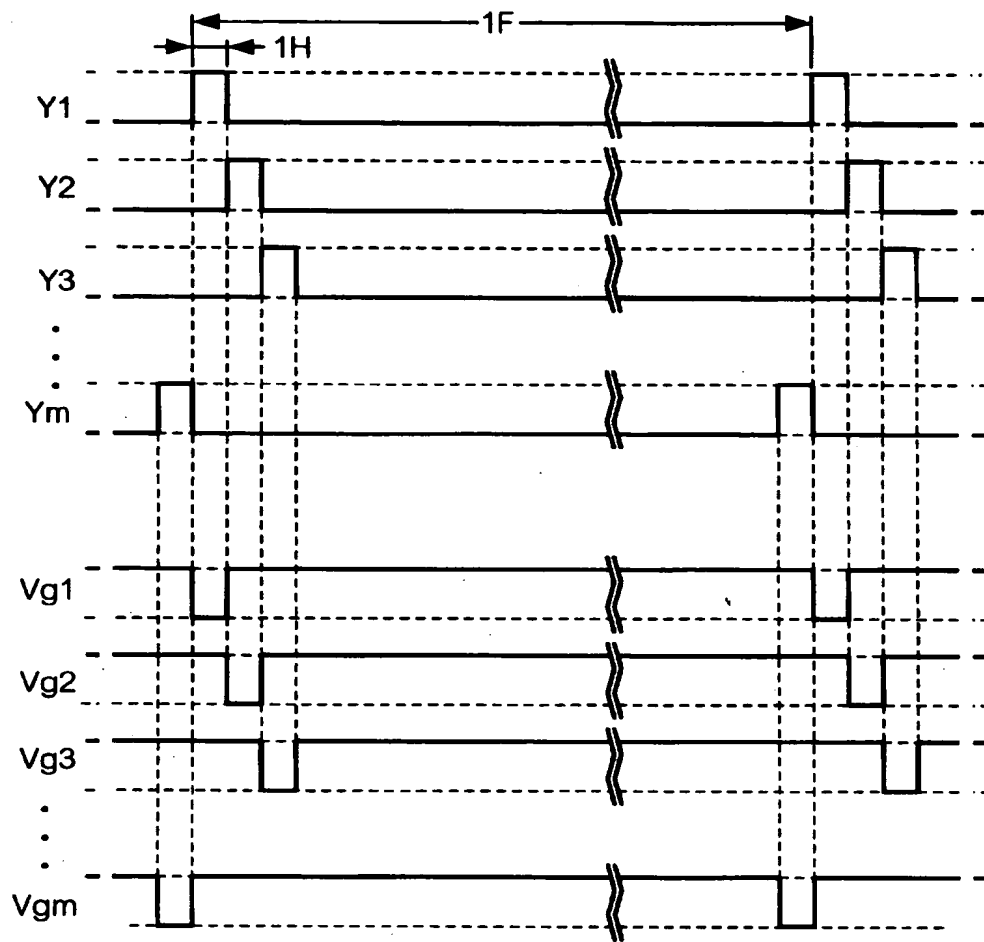


FIG.14

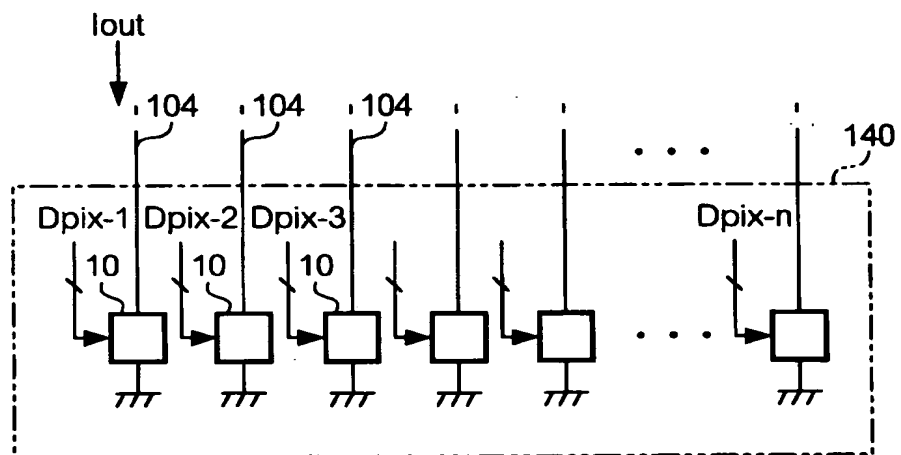


FIG.15

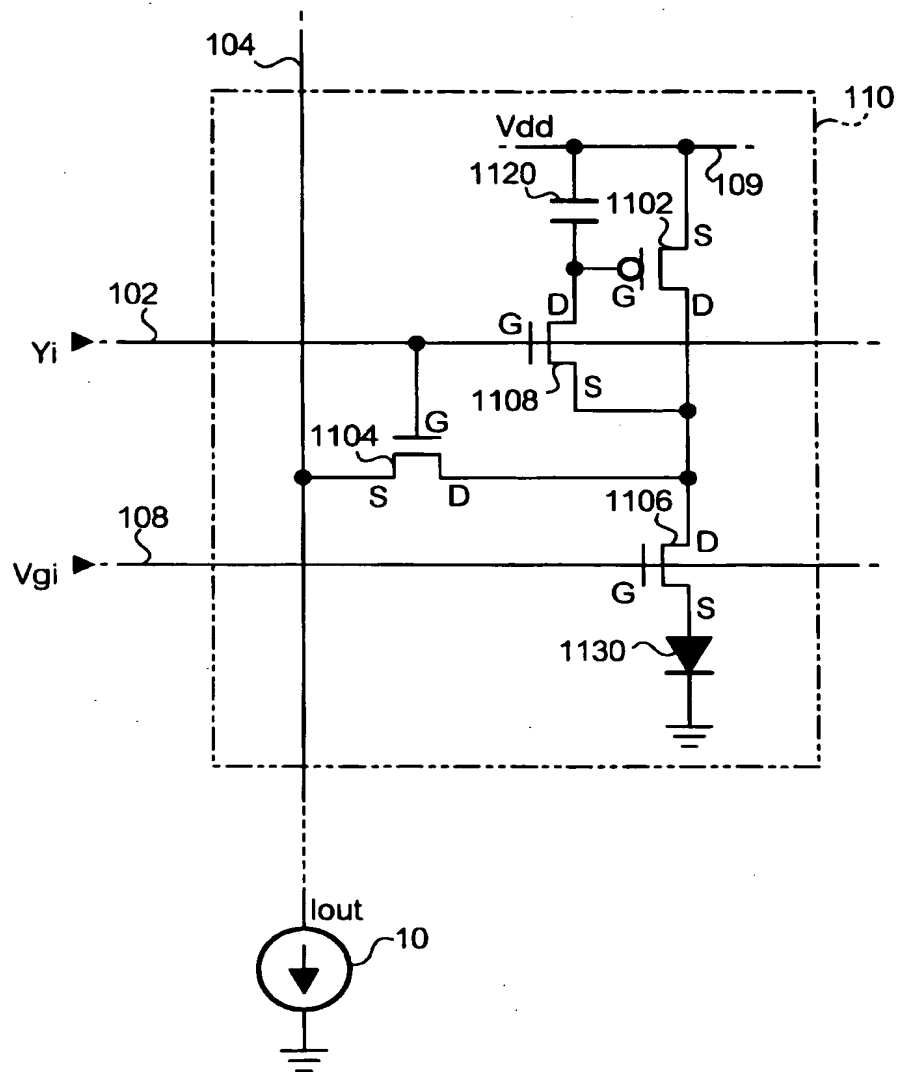


FIG.16

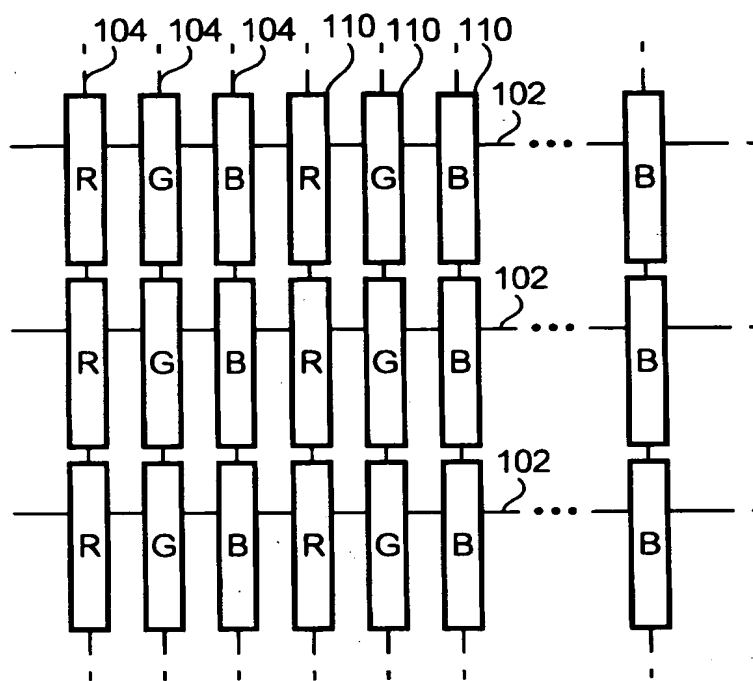


FIG.17

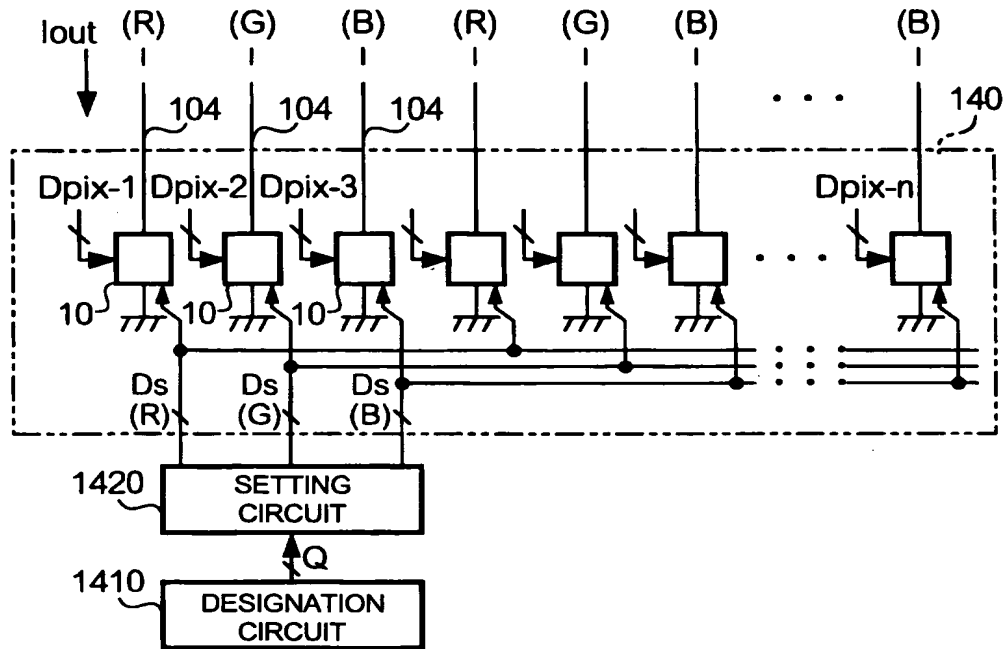


FIG.18

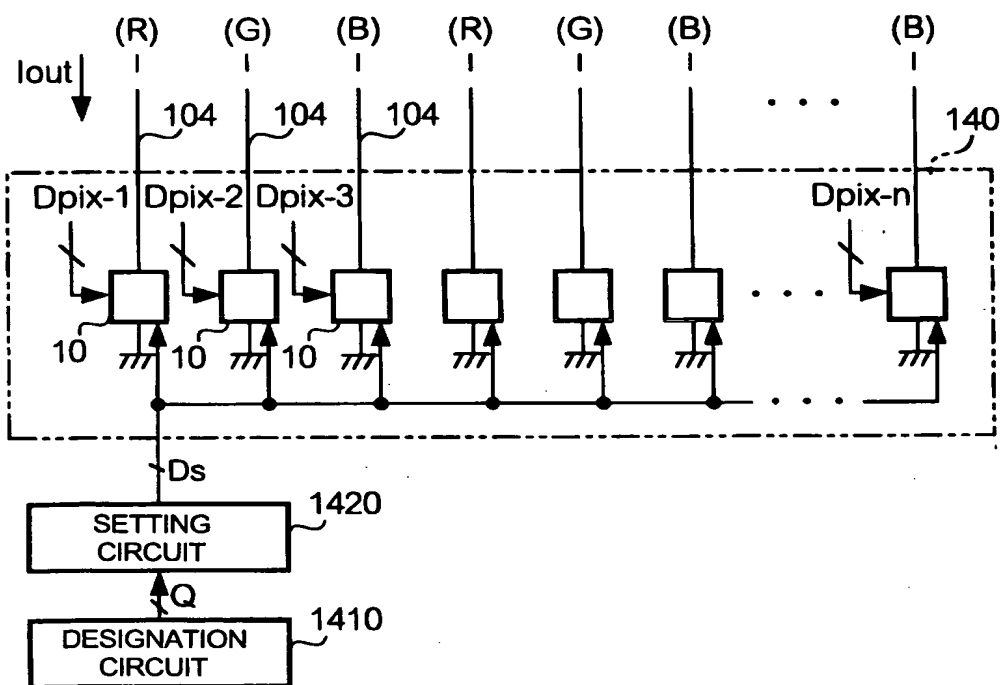


FIG.19

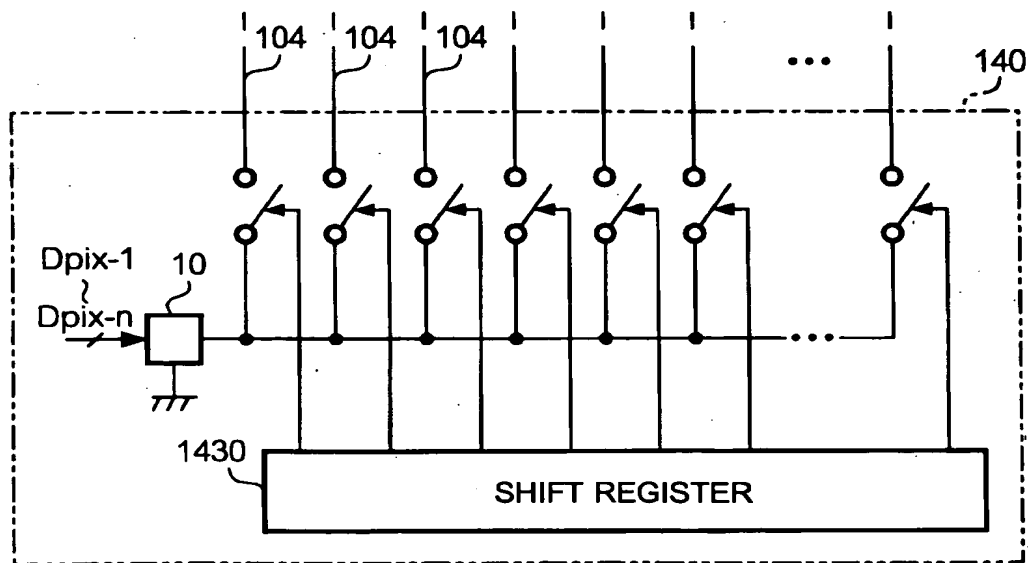


FIG.20

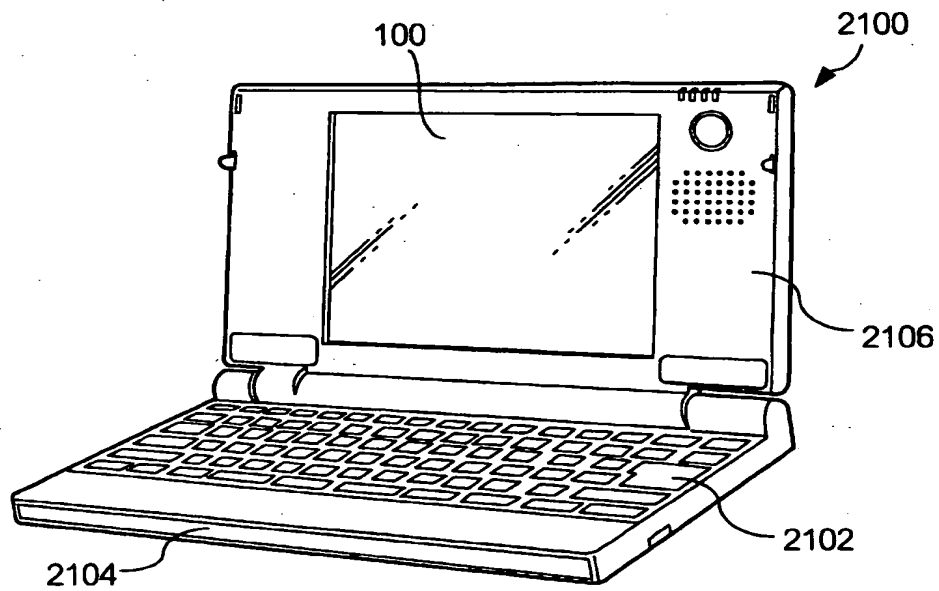


FIG.21

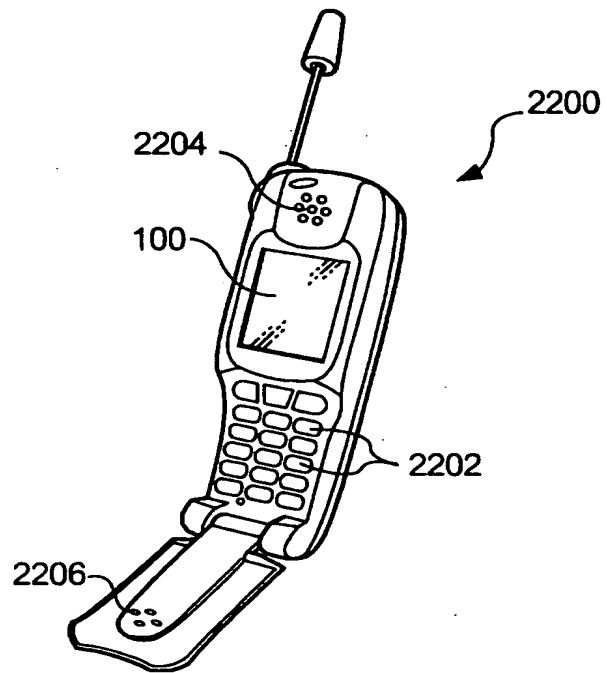


FIG.22

